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Case Report

Paediatric ovarian torsion–A painful twist

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ABSTRACT

Ovarian torsion is a common gynecologic cause of acute abdomen in the reproductive females but it is not commonly encountered in paediatric age group. Safeguarding the ovary is especially important in young girls where the future fertility issue has to be considered. The main challenge in paediatric age group is a prompt diagnosis which aids in the salvagability of the ovary. Herein we are reporting a rare case of ovarian torsion in a 9 year old which was successfully managed by salvaging the ovary.

1. Introduction

Ovarian torsion is a common gynecologic cause of acute abdomen in the reproductive females but it is not commonly encountered in paediatric age group. Only about 2.7% cases of acute abdomen in children were reported due to ovarian torsion.[1] It is a condition where a normal or an enlarged ovary twists around its pedicle thereby compromising the vascularity. It requires early surgical intervention for the preservation of ovarian function. Safeguarding the ovary is especially important in young girls where the future fertility issue has to be considered. In the paediatric age group, the major challenge is the delayed diagnosis due to the rarity of the condition and the nonspecific presentation. An ultrasound may not always be confirmatory in this situation and a colour Doppler might improve the diagnosis. This often leads to a delayed intervention or a diagnosis made on the operation theatre. There is always the dilemma of resorting to a surgical procedure before confirmation in a child. Ovarian torsion can mimic appendicitis, UTI, renal colic or gastroenteritis which is usually the initial differential diagnosis in this age group.[2]

Herein we are reporting a rare case of ovarian torsion in a 9 year old which was successfully managed by salvaging the ovary.

1.1. Case history

Miss X, a 9 year old girl was brought to our emergency department with complaints of acute right sided lower abdominal pain, for 4 days. The colicky type of pain was sudden in onset and was progressing gradually. She was having similar episodes of pain for the past few weeks but was mild in nature and subsided spontaneously. The pain was associated with vomiting but was not bilious or blood stained. There was neither any radiation of pain nor any aggravating or relieving factors. There was no history of fever, urinary or bowel complaints. She was vaccinated for her age and had no significant past surgical or medical history.

On examination, she was afebrile, her general condition was fair and vitals were stable. On abdominal examination, tenderness was elicited in the right iliac fossa and right lumbar region with focal guarding. There was no rigidity or palpable mass in the abdomen. Laboratory investigations were unremarkable except for mild leukocytosis. USG

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pelvis done showed an enlarged right ovary of size 4.8x4x3.5cm and features suggestive of ovarian torsion with a compromised vascularity. There was minimal fluid in the pouch of douglas.

With the provisional diagnosis of right ovarian torsion, patient was planned for emergency laparoscopy. Intra operatively hemoperitoneum of about 30-50ml was noted. The right ovary was enlarged to about 5X4 cm and was bluish coloured. The right ovary along with right fallopian tube was twisted twice around the pedicle. Detorsion of the ovary was done and the vascularity was regained within minutes of detorsion. It was followed by plication of the ovarian ligament. The appendix was normal looking. Post operative period was uneventful and ultrasonogram done on post operative day 5 showed reduction in the size of the right ovary with good vascularity. Her follow up after 12 months showed no complications.

2. Discussion

Ovarian torsion is an urgent condition that calls for early diagnosis and intervention to avoid ovarian necrosis which can be catastrophic especially in children and reproductive age group.

The mobile fallopian tube can facilitate the ovarian torsion along with its vascular pedicle. This can initially lead to obstruction of venous flow and later infarction and necrosis. Infection and peritonitis are also reported complications of ovarian torsion.[3]

Many cases of ovarian torsion have associated masses like functional cyst or neoplasm and are usually seen on the right side. The sigmoid colon on the left side or a hypermobile caecum in the right may be the reason for the preponderance of ovarian torsion in the right side.[4]Hormonal stimulation may be the cause of functional cysts in children which peaks during two periods – the first year of life and at menarche.[5,6]

Ovarian torsion has been described as early as 2 years of age where the child presented with features mimicking gastroenteritis.[7] The child usually presents with an acute abdomen with associated nausea or vomiting. The diagnostic modality of choice is ultrasound. Ultrasound can diagnose ovarian torsion with a positive predictive value of 87% and a specificity of 93%.[8] In majority of cases, the findings are that of an enlarged ovary or an adnexal mass. The ovary gets enlarged due to oedema and venous congestion. In our case also the ovary was enlarged and oedenatous. There have been instances where the ovary was even rotated to the opposite side of the pelvis. A Doppler imaging showing a vascular flow does not completely exclude ovarian torsion as the ovary gets dual supply from ovarian artery and uterine artery. The gold standard diagnostic modality is laparoscopy and not any form of imaging, again a point to be noted in the paediatric age group. In a study by Bolli et al., where they analyzed the children presenting with acute adnexal pathologies it was concluded that abdominal pain, vomiting and an increased CRP values > 5 mg/dl had a predictive value in the diagnosis of ovarian torsion in children aged 2 to 12 years with a sensitivity of 1.00, but the size of the ovary had no association with the torsion.[9] Many studies show that ovaries that torse are otherwise normal during surgery.[10,11]

Management consists of detorsion and oophoropexy as there is a risk of recurrent torsion in ovary with a long pedicle. A necrotic appearance of a torsed ovary does not always call for an oophorectomy as the appearance may not predict the function of the ovary post detorsion.[12,13] Timely interventions often salvages the ovary which is extremely important in the younger age group.

Anders & Powell's study demonstrated that the mean time from the onset of symptoms to treatment was 76 hours in children in with resected and unresected ovaries.[11]

Not many large studies addressing ovarian torsion in the paediatric age group have been published. Almost all studies show acute abdominal pain and vomiting the most common presentation. More studies are needed to characterize this condition in paediatric age group which would help the primary level physician in considering ovarian torsion as a probable cause of acute abdomen in paediatric age group.

Multiple visits by the patient to the clinic for abdominal pain, especially in a short period of time should prompt considering ovarian torsion as a possibility.

3. Conclusion

Ovarian torsion is a dangerous situation that requires early diagnosis and surgical intervention. This often helps to prevent the grave consequences of any further adnexal injury and infarction especially in a pediatric age group. It also reduces the long term effects on the patient as losing an ovary is a very sensitive issue in this age group.

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None.

5. Conflict of Interest

None.

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